# Automated Route Reconnaissance Kit



#### **ARRK** Objective

- Provide equipment and software to simplify and expedite mounted route reconnaissance missions
  - Used to collect route condition and other physical infrastructure and terrain data
  - Exploit reach back operations for technical analysis and sharing data
- Support Current and Future Force requirements



#### Components

#### Hardware

- Data sensor box
- GPS
- Laptop computer
- Laser range finder
- Digital camera
- Military or civilian vehicle mounted
- Hard case for carrying all components (luggage-sized box)

#### Software

- Based on TeleEngineering ToolKit
- Based on FM 5-170 Engineer Reconnaissance
- Automatically determine route slope and radius of curvature







#### Concept of Operation

- Vehicle mounted system, military or civilian
- Camera mounted to windshield
- Capture locations of bridges, fords, ferries, tunnels, obstacles, and other points/items of interest
- Pause system for dismounted reconnaissance
- Process data at completion of route







#### **ARRK Platforms**





AIR

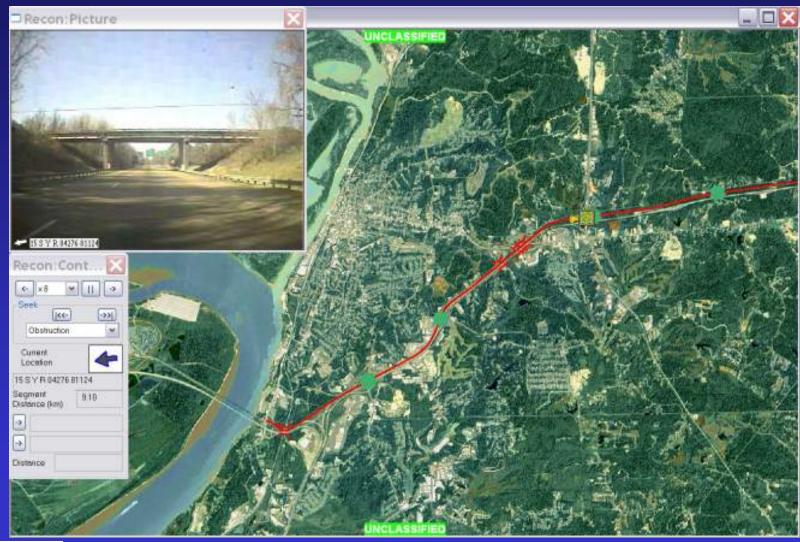




## Natural Disasters

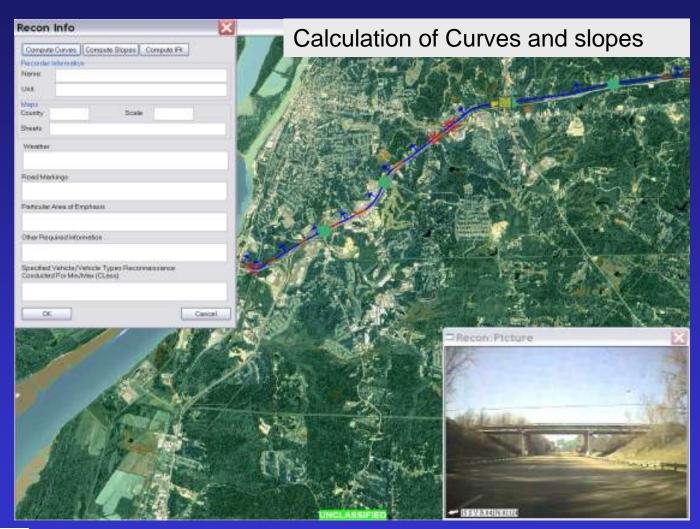


# ARRK Video Output



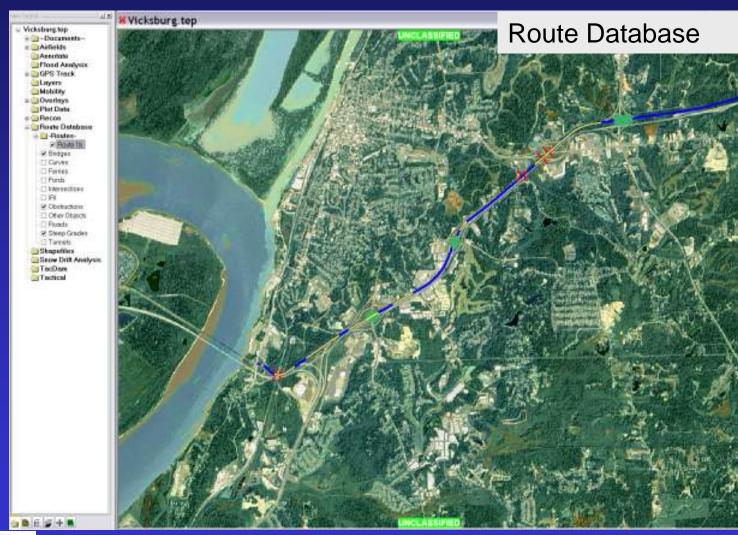


#### ARRK Reconnaissance





#### ARRK Reconnaissance





#### ARRK Data Forms

#### FM 5 - 170

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#### **ARRK Benefits**

- Photographic representation of route
- Can conduct much of the recon from vehicle
- Equipment can be mounted in military vehicles allowing off-road recon of avenues of approach
- Reduces time required to conduct recon (typically by 200 to 400%)
- Takes advantage of current Army forms for reporting reconnaissance results
- Easy to transition enhancements to the field



### Deployed Systems

- Iraq
- Afghanistan
- Germany
- Korea
- CONUS





- CENTCOM
- EUCOM
- PACOM
- USAID
- MEF
- FHWA



# TeleEngineering Operations Center

601-634-2735 / 3485 DSN 312-446-xxxx

TEOC@usace.army.mil
TEOC@TeleEngineering.army.smil.mil

